

Notice of Allowability

Application No.

10/824,659

Examiner

Hieu Nguyen

Applicant(s)

WONG ET AL.

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/15/2004.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 4/15/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Note: The drawing(s) filed on 4/15/2004 is/are accepted by the examiner.

EXAMINER'S AMENDMENT ✓

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

The abstract is amended by examiner (please see attached).

Conclusion

The prior art made of record and not relied upon is considered pertinent of applicant's disclosure.

Honda et al. U.S 5,543,760 (see Fig. 1) discloses a protection circuit for a power amplifier (1) having a direct current voltage detecting circuit means (2), a bias voltage cutoff controller (3), failure determining circuit means (4) and a power supply cutoff circuit (6), but does not have "a second fault detection block" and "a cutoff signal generating block" in combination with the rest of the limitations of the claim(s).

Fujita U.S 4,402,029 discloses (see Fig. 3) a protective circuit having a first voltage comparator circuit (4), a second voltage comparator (5), a control circuit (6) and

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a switch circuit (7) operable in response to the control signal for cutting off at least one of the output transistors, but lacks "a second fault detection block" and "a cutoff signal generating block" in combination with the rest of the limitation(s) of the claim(s).

The following is an examiner's statement of reasons for allowance: ✓

Claims 1-4 are allowed over the prior art because none of the prior art disclosed or suggested showing the particular structure and /or operation recited in these claims namely:

Claims 1-4 call for, among others, a structure of a voltage level detector for protection control of a power amplifier comprising: "a second fault detection block" and "a cutoff signal generating block" in combination with the rest of the limitations of the claim(s)

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

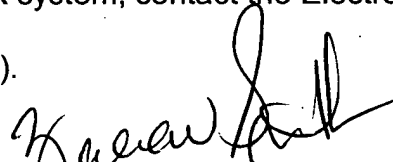
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu Nguyen whose telephone number is 571-272-0218. The examiner can normally be reached on M-F 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hieu Nguyen
AU: 2817



Zandra V. Smith
Primary Examiner

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ABSTRACT OF THE DISCLOSURE

A voltage level detector (8) activates itself through monitoring the voltage level (VSTB) at a standby pin (5) during power-up of an audio power amplifier (10), and can detect fault conditions of an output block (2). Upon detection of the (VSTB) reaching a first threshold level (V_{th1}) and a short to ground at the output terminal (3), the second short-to-ground detection block (81) activates a the second cutoff signal generating block (83). The recovery block (82) monitors the voltage level (VSTB) at the standby pin (5) during power-up. Upon detection of the voltage level (VSTB) reaching a second threshold level ($V_{th2} > V_{th1}$), the recovery block (82) deactivates the cutoff signal generating block (83). The cutoff signal generating block (83) sends a cutoff signal (Sc) to a protection switch block (71) as a request for turn-off of protection switches (7A) on activation, and on the other hand, terminal the sending of the cutoff signal (Sc) on deactivation.